

# CERTIFICATION AND FINANCING PROPOSAL

# ANEMOI ENERGY STORAGE PROJECT IN HIDALGO COUNTY, TEXAS

Published: July 6, 2023

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# **EXECUTIVE SUMMARY**

# ANEMOI ENERGY STORAGE PROJECT IN HIDALGO COUNTY, TEXAS

#### **Project Summary**

Project Name:	Anemoi Energy Storage Project.		
Project Sector (Type):	Sustainable energy (energy storage)		
Objective:	The purpose of the Project is to increase the energy storage capacity of the Texas grid, which will allow the system operator to manage the grid more efficiently and reduce the use of ramp-up/ramp-down fossil-fuel power generating plants. The Project will also help integrate electricity generated by intermittent renewable energy sources, such as solar and wind, and will support a more efficient and reliable power grid by minimizing power disruptions and reducing energy losses resulting from mismatches in supply and demand.		
Expected Outcomes:	The installation of an energy storage facility with a capacity of 200 megawatts of alternating current ( $MW_{AC}$ ) is expected to produce the following results.		
	<ul> <li>Avoid the emission of approximately:1</li> </ul>		
	• 50,571 metric tons/year of carbon dioxide (CO <sub>2</sub> ).		
	<ul> <li>38 metric tons/year of nitrogen oxides (NOx).</li> </ul>		
	$\circ$ 38 metric tons/year of sulfur dioxide (SO <sub>2</sub> ).		
	<ul> <li>Store and deliver up to 118,377 megawatt-hours (MWh) of energy per year.<sup>2</sup></li> </ul>		
Population to Benefit:	97,230 residents (28,597 households).		
Sponsor:	Plus Power, LLC		
Borrower:	Anemoi Energy Storage, LLC (the Project Company).		
NADBank Loan Amount:	Up to US\$40 million.		

<sup>&</sup>lt;sup>1</sup> CO<sub>2</sub>, NOx and SO<sub>2</sub> calculations are based on the potential emissions avoided as a result of charging and discharging 118,377 MWh/year of electricity from the sale of energy based on the Texas energy matrix. The related emission factors are: 0.4272 metric tons/MWh for CO<sub>2</sub>; 0.0003178 metric tons/MWh for NOx and 0.0003178 metric tons/MWh for SO<sub>2</sub> (source: <u>https://www.eia.gov/electricity/state/texas/</u>). <sup>2</sup> Estimation based on information provided by the Spancer The Project is expected to complete 365, two he

<sup>&</sup>lt;sup>2</sup> Estimation based on information provided by the Sponsor. The Project is expected to complete 365, two-hour charge/discharge cycles per year.

# **CERTIFICATION AND FINANCING PROPOSAL**

# ANEMOI ENERGY STORAGE PROJECT IN HIDALGO COUNTY, TEXAS

# **1. PROJECT OVERVIEW AND EXPECTED OUTCOMES**

The proposed project consists of the design, construction and operation of a 200-MW<sub>AC</sub>, twohour duration battery energy storage system (BESS) and a transmission line in Hidalgo County, Texas (the "Project"). Electricity from the grid will be stored and delivered through a 1,100-feet gen-tie line that interconnects the Project and the Pomelo Substation located east of the Project site.<sup>3</sup> The electricity and products generated or enabled by the BESS (ancillary services) will be sold in the wholesale electricity market operated by ERCOT.<sup>4</sup>

The purpose of the Project is to increase the energy storage capacity of the Texas grid, which will allow the system operator to reduce the use of ramp-up/ramp-down fossil-fuel power generating plants and manage the grid more efficiently. The Project will also help integrate electricity generated by intermittent renewable energy sources, such as solar and wind, and will support a more efficient and reliable power grid by minimizing power disruptions and reducing energy losses resulting from mismatches in supply and demand. The Project is expected to store up to 118,377 MWh of energy a year. As a result, the Project will displace the emission of an estimated 50,571 metric tons/year of  $CO_2$ , 38 metric tons/year of NOx and 38 metric tons/year of  $SO_2$ .<sup>5</sup>

# 2. ELIGIBILITY

### 2.1. Project Type

The Project falls within the eligible category of energy storage under the sector for sustainable energy.

<sup>&</sup>lt;sup>3</sup> A Gen-Tie line is a transmission line built for the purpose of interconnecting a new facility into the power grid. <sup>4</sup> Ancillary services are those required to support the reliability of the electricity grid. For ERCOT these services include regulation up, regulation down, responsive reserves and non-spinning reserves.

<sup>&</sup>lt;sup>5</sup> CO<sub>2</sub>, NOx and SO<sub>2</sub> calculations are based on the potential emissions avoided as a result of charging and discharging 118,377 MWh/year of electricity from the sale of energy based on the Texas energy matrix. The related emission factors are: 0.4272 metric tons/megawatt-hour (MWh) for CO<sub>2</sub>; 0.0003178 metric tons/MWh for NOx and 0.0003178 metric tons/MWh for SO<sub>2</sub>.

## 2.2. Project Location

The Project will be developed on 19.37 acres of private land in Hidalgo County, Texas. The Project is located approximately 23 miles north of the U.S.-Mexico border and 24.2 miles northwest of the city of McAllen. The Project will be constructed at the following coordinates: latitude: 26°26'44"N and longitude: 98°28'51"W. Figure 1 illustrates the geographic location of the Project.

Figure 1 PROJECT LOCATION MAP



# 2.3. Project Sponsor and Legal Authority

The private-sector project sponsor is Plus Power, LLC (the "Sponsor"), which will use a special-purpose vehicle, Anemoi Energy Storage, LLC ("Anemoi" or the "Project Company"), to implement the Project. Anemoi is a Texas-based, limited-liability company established in February 2022.

# 3. CERTIFICATION CRITERIA

# 3.1. Technical Criteria

#### 3.1.1. General Community Profile

According to the U.S. Census Bureau, as of July 2022, Hidalgo County had an estimated population of 888,367 inhabitants, representing 3% of the Texas population. The poverty rate in Hidalgo County was 28.8% in 2021, considerably higher than the state average of 14.2%.

Median household income (MHI) for the same year was estimated at US\$44,666, compared to the state average of US\$67,321.<sup>6</sup>

The electricity stored and delivered annually by the BESS will be equivalent to serving up to 97,230 residents (28,597 households). Additionally, the Project is expected to benefit nearby communities through the creation of approximately 77 jobs during construction, as well as three full-time and potentially two to three part-time positions during operation.

#### 3.1.2. Energy Storage in the U.S.

The transition to a low-carbon, and eventually zero-carbon grid, provides challenges and opportunities as increasing amounts of renewable energy are incorporated into the electric system. One of the main challenges is the intermittent nature of renewable energy sources, such as wind and solar. Grid operators must have the capability to regulate and maximize the efficient use of electricity in the grid from both baseload and intermittent sources. One of the simplest and most efficient solutions is the implementation of energy storage systems.

Energy storage is a key tool for providing more flexibility to power grids in the United States. In August 2021, the U.S. Energy Information Administration (EIA) published a report on market trends in battery storage.<sup>7</sup> According to the EIA report, at the end of 2019, there were 163 large-scale BESS in operation with a combined capacity of 1,010 MW, a 28% increase over those reported in 2018.<sup>8</sup> Figure 2 shows the capacity of large-scale BESS in the U.S. in 2019.

(https://www.eia.gov/analysis/studies/electricity/batterystorage/pdf/battery\_storage\_2021.pdf).

<sup>&</sup>lt;sup>6</sup> Source: U.S. Census Quick Facts,

<sup>(</sup>https://www.census.gov/quickfacts/fact/table/TX.hidalgocountytexas/PST045222) 7 Source: EIA, Battery Storage in the United States: An Update on Market Trends, August 2021,

<sup>&</sup>lt;sup>8</sup> Large-scale refers to systems that are grid connected and have a nameplate power capacity greater than 1 MW.



Figure 2 U.S. LARGE-SCALE BATTERY STORAGE INSTALLATIONS BY REGION (2019)

Source: EIA. Battery Storage in the United States: An Update on Market Trends. August 2021

As shown in Figure 2, about 83% of large-scale battery storage capacity in the U.S. is installed in the regions covered by six of the ten independent system operators (ISOs) or regional transmission organizations (RTOs) and in the non-contiguous states of Alaska and Hawaii (AK/HI).<sup>9</sup> In the case of Texas, 114 MW (11.3%) of large-scale battery storage capacity was installed within the ERCOT service area, where the Project will be constructed.<sup>10</sup>

The market for installing BESS in the U.S. is steadily growing, and its legal framework has evolved. In February 2018, the U.S. Federal Energy Regulatory Commission (FERC) issued FERC Order 841, which requires ISOs and RTOs to remove barriers to the participation of electric storage resources in the capacity, energy and ancillary service markets. Each ISO/RTO under FERC jurisdiction was required to revise its tariff to include market rules that recognize the physical and operational characteristics of battery storage resources and to implement the revisions upon approval of tariff compliance by FERC.<sup>11</sup> As of December 2022, nearly 7.8 GW of large-scale BESS were in operation.<sup>12</sup>

Project developers have reported to EIA their plans to install large-scale BESS in the United States, with approximately 20.8 GW expected to be added by 2025.<sup>13</sup> Figure 3 shows the trend as reported in October 2022.

<sup>&</sup>lt;sup>9</sup> ISOs and RTOs are independent, federally regulated non-profit organizations that ensure reliability and optimize supply and demand bids for wholesale electric power.

 <sup>&</sup>lt;sup>10</sup> Source: EIA, Battery Storage in the United States: An Update on Market Trends, August 2021,
 (<u>https://www.eia.gov/analysis/studies/electricity/batterystorage/pdf/battery\_storage\_2021.pdf</u>).
 <sup>11</sup> Ibid.

<sup>&</sup>lt;sup>12</sup> Source: EIA, U.S. battery storage will significantly increase by 2025.

<sup>(</sup>https://www.eia.gov/todayinenergy/detail.php?id=54939)

<sup>13</sup> Ibid





The strongest growth in large-scale battery storage over the past few years has been in Texas, Arizona, Nevada, New Mexico, Florida, Hawaii, Colorado, and Montana.<sup>14</sup> Even though several states do not have policy requirements related to storage, many states, including all four border states, are expected to continue showing strong growth in large-scale battery storage in the coming years.<sup>15</sup> Of the 20.8 GW of BESS that is expected to be installed by 2025, 75% will be located in Texas (7.9 GW) and California (7.6 GW).<sup>16</sup>

#### <u> Texas Energy Profile</u>

As reported by EIA, in 2021, power generation in Texas relied on a mix of energy technologies as shown in Table 1.

<sup>16</sup> Source: EIA, U.S. battery storage will significantly increase by 2025 (<u>https://www.eia.gov/todayinenergy/detail.php?id=54939</u>).

 <sup>&</sup>lt;sup>14</sup> Source: EIA, *Battery Storage in the United States: An Update on Market Trends*, August 2021, (<u>https://www.eia.gov/analysis/studies/electricity/batterystorage/pdf/battery storage 2021.pdf</u>).
 <sup>15</sup> Ibid.

Source	Capacity (MW) 2019	Capacity (MW) 2021
Natural gas	68,857.7	70,901.6
Wind	28,059.5	34,370.3
Coal	18,872.6	18,141.6
Solar	2,447.9	8,838.0
Nuclear	4,960.0	4,980.0
Battery storage	114.2	791.9
Hydroelectric	670.0	706.1
Wood	312.1	309.2
Petroleum	106.3	243.1
Other	224.0	224.0
Other gas	402.9	179.8
Other biomass	89.3	65.7

# Table 1TEXAS POWER INDUSTRY CAPACITY BY SOURCE IN 2019 AND 2021

Table developed by NADBank based on data from the EIA, Texas Electricity Profile 2021 (Full data tables 1–17) (https://www.eia.gov/electricity/state/texas/index.php).

As indicated in Table 1, over the past two years renewable generation capacity has been on the rise in Texas, with the most significant growth in BESS capacity, which increased nearly 600% from 114 MW in 2019 to 792 MW in 2021. At the end of 2022, Texas reported 2.78 GW of installed capacity in large-scale BESS.<sup>17</sup> Moreover, of the 20.8 GW of BESS that is expected to be installed by 2025, 38% will be located in Texas (7.9 GW).<sup>18</sup>

The proposed Project will contribute to the growth of energy storage capacity in the Texas grid, which will allow the system operator to manage the grid more efficiently by reducing the use of ramp-up/ramp-down fossil-fuel power generating plants, as well as energy losses resulting from mismatches in supply and demand. Likewise, it will support the transition to a greener, more sustainable grid by helping integrate electricity generated by intermittent renewable energy sources, such as solar and wind.

#### 3.1.3. Project Scope

The Project consists of the design, construction and operation of a 200-MW<sub>AC</sub> BESS. The preliminary system configuration includes the following components:

• <u>BESS</u>: The Project will use 176 units of a manufacturer-integrated liquid cooling energy storage system. Liquid cooling ensures higher efficiency and a longer battery cycle. Each unit has a battery capacity of 2,752 kilowatt-hours (kWh).

<sup>&</sup>lt;sup>17</sup> Source: ERCOT. Fact sheet. June 2023,

<sup>(</sup>https://www.ercot.com/files/docs/2022/02/08/ERCOT\_Fact\_Sheet.pdf). <sup>18</sup> Source: EIA, U.S. battery storage will significantly increase by 2025, (https://www.eia.gov/todayinenergy/detail.php?id=54939).

- <u>Power conversion system</u>. This system is responsible for converting and conditioning power to and from the battery system. The Project will have 59 conversion systems for battery charge/discharge management.
- *Energy Management System*: This system will monitor, operate and track the BESS remotely, as well as document the performance of the system.
- <u>Electrical substation</u>. A 216-megavolt-ampere (MVA) transformer will convert the electricity sent from the BESS to the interconnection point at the 345-kilovolt ( $kV_{AC}$ ) Pomelo substation, as well as the electricity received from the grid to be stored in the battery system.
- *Gen-tie line*. The Project substation will be connected to the Pomelo Station through a 1,100-foot, 345 kV<sub>AC</sub> interconnection line.

Figure 4 shows the general layout of the project components.



Figure 4 PROJECT LAYOUT

#### 3.1.4. Technical Feasibility

The Sponsor evaluated BESS components from different top-tier suppliers in order to select the equipment best suited to the characteristics of the Project site. The technology evaluation process. included an analysis of the characteristics, reliability and performance of all the system components, as well as a power conversion analysis and a review of product certifications, supplier warranties, etc. The batteries selected by the Sponsor are based on lithium-ion phosphate (LiFePO<sub>4</sub>) technology, which is considered one of the safest, most easily understood and efficient methods of energy storage on the market. It is the technology most commonly used for this application given its high-cycle efficiency and fast-response time. The performance of the battery represents a favorable balance between cost, energy density, degradation and cycle life, making it an optimal choice for stationary grid-tied energy storage solutions. Even more importantly, LiFePO<sub>4</sub> is safer than other commonly used lithium-ion alternatives (i.e., cobalt-based alternatives), ensuring safe and worry-free operations. At the end of 2019, over 90% of energy storage capacity was provided by lithium-ion-based batteries.

Once the batteries reach the end of their useful life, the Sponsor will recycle them in accordance with applicable regulations.

The Sponsor also retained the services of a consultant to carry out an interconnection study in order to determine any improvements that may be required to interconnect the Project to the Pomelo Substation. The study, dated November 2021, concluded that minimal electrical and metering systems were required, in addition to the interconnection agreement, which was executed in May 2022.

#### 3.1.5. Land Acquisition and Right-of-Way Requirements

The site consists of a total of 19.37 acres of private land located within an agricultural and oil/gas production area. The Project site has been used for ranchland and is bordered by ranchland to the north, northeast and west, a transmission line easement to the south and an electrical switch station to the east. The Sponsor secured the land through a real estate purchase option agreement in August 2021. The agreement was amended and executed in September 2022.

#### 3.1.6. Project Milestones

Construction of the facility started in May 2023, with commercial operations beginning no later than April 2024. Table 2 presents the status of key milestones for Project implementation.

Key Milestones	Status
Engineering, procurement & construction (EPC) contract	Executed (February 2022)
Generation/interconnection agreement	Executed (January 2022)
Project site purchase option agreement	Executed (September 2022)
Phase I Environmental site assessment	Completed (February 2023)
Commercial operation date (COD)	Expected April 2024

Table 2SUMMARY OF PROJECT MILESTONES

With respect to the local permits required for Project implementation, the Sponsor submitted a consultation letter to the Hidalgo County Planning Department (HCPD) to verify the

permits/clearances required for project construction and operation. On February 23, 2023, the Sponsor received a letter from HCPD confirming that the following permits/approvals were required:

- Commercial Permit, which was obtained on May 16, 2023; and
- Commercial Utility Clearance, which will be issued upon Project completion.

The Sponsor also requested that the Federal Aviation Administration (FAA) conduct an aeronautical study of the Project. On February 23, 2023, the FAA issued a Determination of No Hazard to Air Navigation in a letter stating that the Project structures do not exceed obstruction standards and would not be a hazard for air navigation.

#### 3.1.7. Management and Operation

Incorporated in 2018, Plus Power, LLC, focuses on standalone battery energy storage systems that foster grid flexibility by providing capacity, energy and ancillary services as more renewable generation enters wholesale energy markets. Plus Power currently has a storage portfolio spanning 20 U.S. states with over 7,000 MW of capacity and is active in nearly all major RTOs and markets.

Power Plus entered into a five-year Operations and Maintenance (0&M) Agreement with a third-party contractor for the Anemoi BESS, with an option to extend the agreement. The maintenance activities to be performed include:

- Perform visual inspections of containment structures;
- Verify calibration and check functionality of relays;
- Check functionality of telecommunications equipment;
- Perform thermographic and visual inspections;
- Perform electrical tests on the voltage breakers;
- Ensure battery monitoring system and battery charging system are operating correctly;
- Measure cell voltage and electrolyte temperature;
- Check cabling and connections;
- Perform infrared scan of the alternate current overhead collection system;
- Perform electrical tests of the transformer;
- Provide preventative maintenance and replacement of inverter parts; and
- Perform visual inspections of the Gen-Tie line.

### 3.2. Environmental Criteria

#### 3.2.1. Environmental and Health Effects/Impacts

#### A. Existing Conditions

Historically, the United States has relied to a great extent on fossil fuels for the generation of electricity. These conventional sources of energy adversely affect the environment due to the harmful emissions produced by their processes, including greenhouse gases (GHG) and other pollutants, such as  $SO_2$  and NOx. Consequently, there is a need for affordable and environmentally friendly alternatives to conventional fossil-fuel-based power generation.

On February 19, 2021, the U.S. officially reentered the Paris Agreement, a legally binding international treaty on climate change, adopted by 196 parties at the 21st Conference of Parties in Paris on December 12, 2015, and entered into force on November 4, 2016. Its goal is to limit global warming to well below 2 degrees Celsius and preferably to 1.5 degrees Celsius, compared to preindustrial levels. To achieve this long-term temperature goal, countries aim to reach a global peak of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century.

According to the EIA, in 2021, the main source of power generation in Texas was natural gas (51%), followed by wind (24.7%) and coal (13.1%).<sup>19</sup> That same year, Texas generated nearly 481,844 GWh of electricity, resulting in the emission of approximately 206 million metric tons of CO<sub>2</sub>, 148,244 metric tons of NOx and 147,939 metric tons of SO<sub>2</sub>.<sup>20</sup>

#### B. Project Impacts

Battery storage systems help smooth out the delivery of intermittent resources, such as wind and solar, by storing energy and delivering it when demand increases. They also help prevent emissions by reducing the need for fossil-fuel power plants to regulate constant changes in energy supply and demand. As the energy supply mix becomes cleaner with low- and no-carbon resources, energy storage will help integrate that supply mix into the grid more easily and reliably.

The Project will reduce the demand for electricity generated by fossil fuel-based power plants, thus reducing emissions. The anticipated environmental outcomes from the installation of a 200-MW<sub>AC</sub> battery storage system (or approximately 118,377 GWh per year) include the displacement of an estimated 50,571 metric tons/year of  $CO_2$ , 38 metric tons/year of NOx and 38 metric tons/year of SO<sub>2</sub>.

#### C. Transboundary Impacts

No negative transboundary impacts are anticipated as a result of the development of the Project; on the contrary, a beneficial effect is anticipated on regional air quality due to the decreased demand on fossil-fuel-fired electrical plants in the region.

 <sup>&</sup>lt;sup>19</sup> Source: EIA, Texas Electricity Profiles, (<u>https://www.eia.gov/electricity/state/texas/index.php</u>).
 <sup>20</sup> Source: Ibid.

#### 3.2.2. Compliance with Applicable Environmental Laws and Regulations

#### A. Environmental Clearance

The Sponsor conducted the following environmental studies to evaluate the potential impact of implementing the Project, as well as to identify any mitigation measures that might be required.

<u>Phase I Environmental Site Assessment</u>

In February 2023, an independent consultant hired by the Sponsor completed a Phase I Environmental Site Assessment of the Project site to determine the presence of recognized environmental conditions, controlled recognized environmental conditions, historical recognized environmental conditions, business environmental risks or de minimis conditions, which need to be considered for Project implementation.<sup>21</sup> The consultant carried out the following activities:

- <u>Visual assessment</u> The consultant visited the site and conducted a visual survey for any recognized environmental conditions in connection with the Project site.
- <u>Interviews</u> The consultant interviewed the landowner to gather information on historical and current property use. The consultant also interviewed the Project Sponsor for additional information.
- <u>Environmental records review</u> Available records were reviewed to identify any environmental information of any kind in connection with the Project site.
- *Review of historical and land use documents*. The consultant reviewed aerial photos and maps to identify any conditions in connection with the Project site.
- <u>*Review of government records.*</u> The consultant consulted state and/or local government officials, as applicable, to obtain information about any environmental records in connection with the Project site.

No recognized environmental conditions of any kind were identified in connection with the Project site.

<sup>&</sup>lt;sup>21</sup> In accordance with ASTM International (ASTM), *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (Designation E1527-13). ASTM defines a *recognized environmental condition* as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property." ASTM defines a *controlled environmental condition* as "a *recognized environmental condition* resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority." ASTM defines a *historical environmental condition* as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority." ASTM defines a *historical environmental condition* as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority." ASTM defines a *business environmental risk* as an environmental condition that "can have a material environmental or environmentally driven impact on the business associated with the current or planned use of a parcel of commercial real estate." ASTM defines a *de minimis conditions* as "a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

#### Site Evaluation Report

An evaluation of the Project site was performed by a third-party consultant in October 2021 to identify the potential existence of cultural or environmental features of concern. The study indicated that no contaminated sites, critical habitats or cultural and historical issues were found at the site.

#### <u>Critical Issues Analysis</u>

In February 2023, a consultant hired by the Sponsor completed an analysis to identify wetlands, floodplains and cultural resources that may occur at the Project site. The consultant evaluated existing information, including geographic information system data. Based on available information, the consultant concluded that the Project site does not support wetlands or waterbodies, Federal Emergency Management Agency (FEMA) floodplains or known cultural resources; therefore, additional studies are not needed.

With respect to cultural resources, the analysis concluded that there are no state requirements for conducting surveys on foot; therefore, a cultural resource assessment was not anticipated. However, given the absence of cultural resource studies, the consultant recommended development of an Unanticipated Discoveries Plan prior to construction startup. This Plan was completed in April 2023 and includes a series of immediate actions in case cultural resources are found during construction of the Project.

#### Endangered Species Act Compliance

The Sponsor retained the services of a consultant to perform an Endangered Species Act (ESA) compliance evaluation. The purpose of the review is to identify the potential occurrence of federally listed threatened and endangered species within the Project site and the likelihood of adversely impacting them. Measures to ensure ESA compliance typically are considered in the project design phase to avoid impacts to federally listed species.

The technical memorandum, dated November 2021, reported that eight species of concern and one candidate to be listed as threatened or endangered, are known or considered to have the potential to occur in Hidalgo County. The consultant reported that the Project will not impact the eight species of concern. However, it may impact the monarch butterfly, which is currently a candidate for listing as threatened or endangered in 2024 by the U.S. Fish and Wildlife Service (USFWS). While the monarch butterfly, as a candidate species, is not subject to the legal protections of the ESA, USFWS encourages proactive conservation efforts before species are listed and their habitats become highly imperiled. Implementing early conservation efforts before species are listed as endangered gives property owners more flexibility in managing their resources and land use.

According to the technical memorandum, monarch butterflies occur in Texas during the spring both for breeding (March through early July) and as pass-through migrants (late April through late July) and occur in the state again as south-bound migrants during the fall, generally from September through early November. The presence of the monarch butterfly on the Project site depends on the potential existence of milkweed plants, a breeding habitat, and other flowering plants that provide nectar for feeding. Based on those conditions, the consultant further reviewed the likelihood of this potential habitat and feeding vegetation for the Monarch in the Project area.

The consultant found that a few species of milkweed have been reported from within 20 miles of the Project area, generally overlapping with observations of the monarch. The closest observation of milkweed is approximately eight miles east of the Project area. Based on this, the report suggests that milkweed plants able to support breeding by monarch butterflies could be present in the Project area along with other flowering plants that when in bloom could provide nectar for adult butterflies, either migrants or locally breeding individuals. Consequently, the report acknowledges that construction of the proposed Project could cause loss of monarch butterfly habitat and if milkweed was removed from the site during the spring, construction of the proposed Project might also result in the destruction of monarch eggs and larvae. Therefore, the report concludes that the proposed Project may impact the monarch butterfly, although, if vegetation was cleared from the Project area outside of the monarch spring breeding season, any project-related impact to monarch butterfly would be relatively minor given the small footprint of the proposed Project.

#### Protected Species Habitat Assessment and Raptor Nest Surveys

More recently and prior to clearing vegetation on the Project site, the Sponsor contracted a second consultant to conduct a follow-up protected species habitat assessment and raptor nest survey within the Project site and a 660-foot buffer zone. In this case, the technical memorandum defines "protected species" as any species listed, proposed or a candidate for listing as endangered or threatened by the federal or state government, or subject to the Bald and Golden Eagle Protection Act (BGEPA).

The consultant reviewed the initial assessment performed in 2021, as described above. In addition to the nine species identified in the previous assessment, the study identified 23 state-protected species covered under the Texas Parks and Wildlife Code with potential to occur in Hidalgo County and noted that the bald and golden eagles, protected by the BGEPA, could also occur in the county. To better assess the likelihood of an impact to the protected species or their habitat, the consultant surveyed the project site on foot, along with documenting any observations of wildlife or potential habitat while driving public roads within the buffer area.

During the field survey, the consultant observed several species, including 14 bird, two mammal, three reptile and one insect species, none of which are protected by regulatory requirements. Potential habitat for the state-protected Texas horned lizard was identified in the Project area, along with its primary food source, the harvester ant. To avoid impacts to the lizard during construction, the consultant recommended following the best management practices described on the Texas Parks and Wildlife Department (TPWD) website. No potential habitat for other protected species was identified within the Project area.

The consultant reported that no raptor nests were identified within the site; however, potential nesting habitat for raptors and songbird species protected by the Migratory Bird Treaty Act of 1918 (MBTA) was present. To avoid an impact, the consultant advised clearing vegetation outside of the general bird nesting season, March 15 – September 15; otherwise, additional surveys should be conducted within seven days prior to clearing vegetation to identify any active nests.

#### Avian Nest and Texas Horned Lizard Surveys

In accordance with best management practices, days prior to clearing vegetation at the site, the Sponsor's consultant conducted field surveys to document any potential observations of active bird or raptor nests, as well as any sightings of the Texas horned lizard. Surveys were conducted on two dates, May 8 and May 12, 2023.

During the May 8<sup>th</sup> avian nest survey, a pair of scissor-tailed flycatchers were observed exhibiting nesting behaviors and a nest was recorded in a Mesquite tree in the northwestern portion of the Project area.<sup>22</sup> The nest was too high in the tree for the biologist to determine if the nest was active. During the second visit to the site, the biologist again observed nesting behaviors by the birds but does not report verifying if the nest was active. However, the technical memorandum describes that after the biologist left, on May 12, 2023, Anemoi personnel reported they had viewed inside the nest, determined that no eggs or nestling were present, and removed the nest from the tree. Additionally, during the second visit, the biologist recorded an oriole beginning to weave a nest within the same tree as the scissor-tailed flycatcher nest. Since the nest was not fully formed or active with eggs, Anemoi personnel removed the materials from the tree. The tree and remaining vegetation in the nest buffer zone were cleared after the removal of the nests on May 12, 2023. No other nests thought to be active were recorded during the surveys.

The Texas horned lizards are most vulnerable to activities such as vegetation clearing during their active months, typically early May through September. Therefore, on May 8 and May 12, 2023, prior to clearing vegetation, the sponsor's consultant conducted a survey for the Texas horned lizard to avoid and minimize impacts on the state-listed threatened species. While four harvester ant nests, the lizard's primary food source, were recorded during survey activities, no Texas horned lizards were sighted during either survey. However, while on site to provide sensitive wildlife and resources awareness training to the Sponsor's personnel on May 9<sup>th</sup>, the biologist observed one Texas horned lizard within the Project site. The lizard was captured and relocated according to best management practices provided by the TPWD.

Site preparation works started on May 8, 2023, including the activities of the SWP3 and best management practices to minimize potential impacts. Surveys also began on May 8, 2023, and were completed after uncleared sections of the site were revisited on May 12<sup>th</sup>. According to the technical memorandums issued by the Sponsor's consultant, specific efforts were undertaken to identify any protected or threatened species and their habitat in the interest of avoiding and minimizing impacts caused by the vegetation clearance activities. Any necessary mitigation measures are proposed and described in the next section.

<sup>&</sup>lt;sup>22</sup> The scissor-tailed flycatcher is included in the list of migratory bird species protected by the MBTA.

#### <u>Permitting</u>

On April 12, 2023, the Sponsor submitted a Notice of Intent to the Texas Commission on Environmental Quality (TCEQ), under the terms of Texas Pollutant Discharge Elimination System (TPDES) Stormwater Construction General Permit (CGP) TXR150000. A Notice of Intent Authorization (NOIA) letter was issued by the TCEQ on the same date and includes the CGP authorization. The NOIA also mentions an additional authorization under the Edwards Aquifer Protection Program, which is not required since the Project is not located within any areas protected under that Program.

As part of the requirements of the CGP, a Stormwater Pollution Prevention Plan (SWP3) was prepared and completed in April 2023. The SWP3 includes the activities to be carried out as part of Project construction and includes a description of best management practices to be performed in order to minimize potential impacts during construction, as described in the following section.

#### B. Mitigation Measures

Due to the observation of protected species and their habitat on the Project site, the Sponsor will have a local biologist on call during Project construction to assist in applying appropriate mitigation measures to avoid potential impacts. If any protected species, related habitat or previously unidentified potential habitat is encountered during project construction, the certified biologist will be notified, and any construction activities with potential impact will cease immediately until the species or habitat is protected in accordance with appropriate best management practices.

Additionally, the technical memoranda and SWP3 described above, along with other published sources, provide the following recommendations and best management practices:

- *Flora*. A revegetation plan will be carried out post-construction for areas requiring restoration (e.g., any additional disturbances outside of the proposed impervious pad and roadways). The areas will be reseeded until a 70% uniform, perennial vegetative cover is achieved per the TPDES CGP. To ensure that the seeds are an appropriate, native mix for the site, the contractor will use a seed mixture that meets the requirements established by the Texas Department of Transportation.
- <u>Dust control</u>.
  - Watering will be used as necessary to control dust.
  - $\circ$  Silt fences will be installed along the Project perimeter to retain soil on disturbed land.^{23}
- *Solid waste*. Litter will be removed daily and will be disposed of in dumpsters located in laydown areas. Final disposal will be carried out by the contractors.

<sup>&</sup>lt;sup>23</sup> A silt fence is a temporary sediment barrier made of porous fabric.

Source: U.S. Environmental Protection Agency. Stormwater Best Management Practice - Silt Fences (<u>https://www.epa.gov/system/files/documents/2021-11/bmp-silt-fences.pdf</u>)

• *<u>Stormwater</u>*. Caliche pits will be constructed to permanently control post-construction runoff.

Additionally, the Sponsor will prepare an Oil Spill Prevention, Control and Countermeasure Plan as part of its standard processes for Emergency Operation Planning. This plan is expected to be completed by August 2023.

#### C. Pending Environmental Tasks and Authorizations

No environmental authorizations are pending for Project implementation.

#### **3.3. Financial Criteria**

Project construction will be financed with equity from the Sponsor and a loan from NADBank and other lenders. The proposed payment mechanism for the loan is standard for similar renewable energy transactions in the United States. The source of payment will be the revenue obtained from the sale of electricity and ancillary services in the wholesale electricity market operated by ERCOT. Project revenue is estimated to be sufficient to: (i) cover scheduled 0&M expenses; (ii) pay the debt service on the senior loan; (iii) fund any debt service and other reserves; and (vi) comply with debt service coverage requirements.

Considering the Project's characteristics and based on the financial and risk analyses performed, the proposed Project is considered to be financially feasible and presents an acceptable level of risk. Therefore, NADBank proposes to provide a market-rate loan for up to US\$40.0 million to the Project Company for construction of the Project.

# 4. PUBLIC ACCESS TO INFORMATION

#### 4.1. Public Consultation

On July 6. 2023, NADBank published the draft certification and financing proposal for a 30day public comment period. The following Project documentation is available upon request:

• Phase I Environmental Site Assessment, February 2023.

#### 4.2. Outreach Activities

NADBank also conducted a media search to identify potential public opinion about the Project. No specific articles or references to the Project were found. No public opposition to the Project has been detected.

The Sponsor has followed all public consultation requirements in order to comply with applicable environmental clearance and permitting processes.